IED Defeat

Purpose: MCWL's IED Defeat initiative is aimed at significantly reducing the number of casualties caused by the use of improvised explosive devices (IEDs). The goal is to develop a synergistic combination of advanced technologies and TTPs that provide the Marine warfighter with defense in depth against the IED threat.

Background: IEDs have played a significant role in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), and their use is expected to be emblematic of future operations in the Global War on Terrorism (GWOT). Convoys and patrols (mounted and dismounted) have been frequently targeted with IEDs disguised in ways that make them indistinguishable from the abundance of refuse found along typical roads, especially in Iraq. Once hidden, IEDs are initiated in a variety of ways, including mechanical (e.g., pressure plates buried under a road), electrical (e.g., command wires attached to remotely located switches), remote control (e.g., keyless entry fobs, car alarms, wireless door bell ringers, etc.). Cell phones, long-range cordless telephones, satellite phones, two-way family radio systems and other wireless communication devices are also an emerging IED initiation mechanism. As currently deployed ECM devices and improved TTPs demonstrate their effectiveness, the enemy has increased his use of suicide bombers, who wear explosive-laden vests or drive explosive-laden vehicles into coalition convoys and other high value targets. US and coalition forces remain vulnerable to these unpredictable attacks. MCWL is partnering with the Joint warfighting community to use every means available to predict, detect, prevent, neutralize and mitigate these attacks including cutting edge technology and the development of counter-IED TTPs.

Description: MCWL's IED Working Group has worked to rapidly identify, evaluate and facilitate the fielding of a wide variety of counter-IED systems, including electronic countermeasures and surveillance systems, IED and explosives detection devices for both mobile and stationary applications, unmanned aerial vehicles (UAVs) for persistent surveillance and counter-IED operations, multifunction EOD robots, pre-detonation systems and devices, advanced body and vehicle armor protection technology, and other COTS or special purpose devices, systems and technologies. Some of these are described in separate initiative sheets in this ECP.

Deliverable Product(s): Marine warfighters will have the ability to defeat IEDs across the spectrum of activities, including: prediction of enemy IED operations and emplacement points; detection of emplaced IEDs; detection and interdiction of IED-related activities; prevention of IED detonation; neutralization of located IEDs; and mitigation of the effects of IED blast and fragmentation on personnel and equipment.

Milestones:

TASK	FY06
X-Ray Backscatter Systems Deployed	▲
RCIED ECM Systems Upgrade Deployed	▲
Hyper-Detection System Prototype Complete	▲

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